Newsletter of the North American Mycological Association

THE MYCOPHILE

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Recruiting a New Generation of Mycologists

How to engage youth in mycology

by Nicole A. Hynson

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Mendocino, CA: A UC – Berkeley undergrad reacts to her first mushroom foray.

If I were to take a trip back in time to 20 or so years ago and ask myself what I would be doing in the year 2009, I don't think the answer would have been studying fungi. As a young person, never in a million years would I have thought that the job of mycologist was real or just as legitimate as say astronaut, doctor, or ballerina. Yet here we are! Now, as a graduate student and teacher of mycology, I often wonder what is it about fungi that has held my interest. In the answer to this question is perhaps the solution to getting young people interested in mycology.

The first bit of fungal bait that comes to mind is wild edible mushrooms. As a teenager living in Oregon, collecting wild edibles was what first got me hooked on fungi. However, compared to many places in Europe and Asia, wildcrafting [*gathering or harvesting from the wild —Ed.*] in general is not a common American pastime. Most American children are not encouraged by their families or teachers to learn about wild edibles. For average American children it is actually quite the opposite: they are taught that mushrooms are dangerous and should be avoided. The one exception is the benign button mushroom that may show up in the marinara on spaghetti night. This lack of exposure to fungi already presents a hurdle for educators who are interested in getting kids engaged in the fungal world.

Furthermore, as the child grows up, fungi stop being associated just with "gross toadstools" and move further into the realm of taboo where, if one is interested in fungi, one is automatically aligned with the psychedelic movement of the '60s or the occult.

An additional challenge is that, unlike less morphologically and seasonally variable organisms such as birds, bugs, or even plants, mushrooms cannot be correctly identifed only from information gleaned from a book, video, or lecture; the skill must be handed down directly from person to person. Thus, learning to identify mushrooms is one of the last remaining oral traditions we have, which makes it all the more valuable and at risk.

Because I was fortunate enough to have friends who were into mush-

(*Continued on page 4*)

NAMA Forayers Meet in Cajun Paradise

Gulf States Mycological Society will host the North American Mycological Association's annual foray in Lafayette, LA, Thursday through Sunday, November 26–29, Thanksgiving week. The event will be housed at the Holiday Inn – Lafayette, 2032 N.E. Evangeline Thruway, Lafayette (on the access road of Interstate 49, one block south of the intersection with Interstate 10). All activities will be held onsite, and we have ample space for dining, presentations, presort, mushroom displays, vendors, and bus and car parking.

Lafayette is considered the heart of Acadiana (Cajun) culture. A good introduction to this unique part of America is the Acadian Cultural Center in Lafayette, operated by the National Park Service, which offers museum exhibits, a shop, and a 40-minute film on the Acadian people. If you have time, the local restaurants provide a wide assortment of Cajun cuisine. In St. Martinville, one can visit the Evangeline oak,

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NAMA seeks nominations for President, 1st Vice-President, Secretary, Executive Secretary

Send nominations—including description of qualifications and experience, and consent to serve—to Adele Mehta, 2nd Vice-President, 4917 West Old Shakopee Road, Bloomington, MN 55437. ***Required materials must be submitted prior to November 19, 2009.*** Check the NAMA website (www.namyco.org) for additional information.

FROM THE PRESIDENT

I would hazard a guess that most NAMA members have never attended a national foray. Some of us attend them every year for obvious reasons—such as the mushrooms, many of which aren't normally seen in your part of the country. Then there's the opportunity to learn about fungi from the experts; the lectures, workshops and evening programs are worth the trip alone. But to me one of the best reasons to attend the national foray is the people—a mixture from all walks of life, professional mycologists, amateur mycologists who earn a living from nearly every vocation imaginable, ranging in age from college students to senior citizens, all sitting together enjoying each other's company and learning. Even for first-time attendees the atmosphere is one of a homecoming; good friends are made immediately.

This year's national foray is being held in Lafayette, LA, November 26–29, hosted by the Gulf States Mycological Society. This is the week of Thanksgiving, which for some creates a conflict; however, it's a time when many of the professionals can attend without a conflict with their university duties. Therefore, this is a great opportunity to learn from the experts. Drs. Clark Overbo and Juan Mata will serve as co-chief mycologists, and their knowledge of southern fungi will be utilized; many other mycologists familiar with the deep south will be present.

On another note, for those of us who remember the foray at Beaumont, TX, several years ago, this is a chance to again visit this wonderful part of the country. We remember the hospitality of the Gulf States Mycological Society, the dancing and especially the Cajun food— delicious. And if you plan properly, like me you'll head to the gulf after the foray for a couple of days of fishing and relaxing.

I urge you to attend the foray this year. This is truly a special part of the country, and as always our host has taken steps to ensure that this will be a special, unforgettable occasion. Even the mushrooms should be in full force at this time of the year. I hope to see you there! —*Ike*

NAMA Backs a Winner: Ophelia Barizo

A Maryland teacher and member of NAMA has been awarded a Toyota TAPESTRY grant, sponsored by Toyota and the National Science Teachers Association.

Ophelia Barizo, a science teacher at the Hagerstown, MD, Highland View Academy, was awarded a $10,000 Toyota TAPESTRY grant for excellence and innovation in science teaching. She was honored in March 2009 at the National Science Teachers Association (NSTA) National Conference on Science Education in New Orleans, LA. Under Ms. Barizo's direction, students will use the grant to study fungi and the role they play in their interaction with plants. Students will also research the impact of fungi on medicine, ecosystems, and the carbon cycle and present their findings. Her grant proposal was supported by NAMA with an accompanying letter from Sandy Sheine, the NAMA Education Chair.

Sponsored by Toyota Motor Sales, U.S.A., Inc., and administered by NSTA, Toyota TAPESTRY is the largest annual K–12 science teacher grant program in the United States. Award-winning projects are selected from three critical areas for today's youth: environmental science, physical science, and science applications that promote literacy. Fifty grants of up to $10,000 are awarded each year, along with a minimum of 20 grants of up to $2,500 each. "Supporting excellent teachers who can excite and energize

(*Continued on page 3*)

Moving?

Please send your new address, ***two weeks*** before you move, to

Ann Bornstein
NAMA Membership Secretary
61 Devon Court
Watsonville, CA 95076-1160
annstitcher@charter. net

Otherwise—you may not be getting your newsletter for a while. Each issue, several *Mycophiles* are returned as undeliverable because of no forwarding address on file. NAMA is charged ***seventy cents*** for each returned or forwarded newsletter.

NAMA is a 501(c)(3) charitable organization. Contributions to support the scientific and educational activities of the Association are always welcome and may be deductible as allowed by law. Gifts of any amount may be made for special occasions, such as birthdays and anniversaries, and for memorials.

Special categories include
Friend of NAMA: $500–900
Benefactor: $1000–4900
Patron: $5000 and up

Send contributions to
Judith McCandless, Treasurer
330 Wildwood Place
Louisville, KY40206-2523
judithmc@bellsouth.net

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Web site: ***www.namyco.org***

Isaac Forester, President
P.O. Box 1107
North Wilkesboro, NC 28659-1107
mycoCPA@aol.com

Bruce Eberle, Editor-in-Chief
Interim Executive Secretary
6586 Guilford Road
Clarksville, MD 21029
bruce_eberle@msn.com

Judith Caulfield, Production Editor
1205 Hanover Street
Chattanooga, TN 37405
editor@anniegraham.com

The Truth about NAMA Finances

Over the years the rumor that NAMA is in financial trouble keeps surfacing, and I'm amazed at the number of times the subject is brought up to me. Beginning at the trustee's meeting held in Collegeville, MN, in 2001, which I did not attend, there was much discussion concerning NAMA dues and the belief that, based on dues alone, NAMA would be insolvent within two years. Ramifications of this short-sighted discussion continue to surface to this day and can only be detrimental to the Organization; no one wants to ride on a sinking ship. Now for the facts:

When I became NAMA's treasurer in 1994, the Organization had net assets totaling $39,154. Between then and now, this balance has ranged from $37,213 to $121,360 on the year-end financial statements. Per my last correspondence with the current NAMA treasurer, the Organization currently has net assets of $57,905. The last membership dues increase was approved by the trustees in 1999, effective January 1, 2000. The previous year's membership dues revenue was $32,949. The year the increase went into effect, dues revenues rose to $54,918, mainly because of an increase in lifetime memberships before the increase became effective. The subsequent year, dues revenues leveled off at $35,222 and have been fairly consistent since that time.

For the purpose of long-term financial planning, the NAMA trustees established an endowment fund in 2004. Currently this fund has a value of approximately $25,000. The fund was established by combining excess funds from NAMA committees and special events, generous donations from the trustees and others, particularly Ben Woo, and transfers of a portion of NAMA's net income each year. Admittedly, there have been times since 2004 when current expenses stressed the operating budget, but to the trustees' credit they have remained committed to leaving these funds untouched. The accumulation in this fund will insure the continued financial security of the Organization.

The bottom line is that NAMA has been and continues to be a viable, solvent, and financially stable organization. NAMA's financial statements are public record, and copies of NAMA's prior year's tax returns can be viewed at Guidestar.org. Few nonprofits of which I'm aware have maintained as stable a financial condition as NAMA, especially in these economic times. NAMA continues to fund all of its programs (scholarships, vouchering, educational programs, etc.) Through the generosity of donors, the loyalty of NAMA members ,and the oversight of a very capable Board of Trustees, NAMA continues to be very much afloat. *—Ike*

TAPESTRY Grant, cont. from 2

their students is a great way to make an impact on future generations," said Michael Rouse, Toyota's vice-president of philanthropy and community affairs. "TAPESTRY's reach over the past 19 years has allowed countless numbers of students to be inspired by the possibilities of science education."

The National Science Teachers Association, based in Arlington, VA, is the largest professional organization in the world promoting excellence and innovation in science teaching and learning for all. NSTA's membership includes more than 58,000 science teachers, science supervisors, administrators, scientists, business and industry representatives, and others involved in science education. It is hoped that some of our NAMA members who are science teachers will be inspired to apply for grants, offer to be speakers about fungi education, or just attend NSTA national and local conferences. *—Sandy Sheine*

Left to right: Eric Crossley, Manager, Toyota TAPESTRY Grant for Teachers; Page Keeley, President, National Science Teachers Association; Ophelia Barizo; J. L. Armstrong, National Manager, External Affairs of Toyota Motor Sales of the USA

Four of Ophelia's students from Highland View Academy presented their posters at the Mycological Association of Washington DC's "Mushroom Days," held at Brookside Gardens on October 5. From left: Jonathan Springer, Josh Calhoun, Caitlin Worden, Andrea Downs.

We're Sorry

Last issue we requested members contact Ann Bornstein to provide their e-mail address so they could be contacted and to obtain an electronic copy of the 2009 NAMA Membership Directory. Unfortunately, the new editor erred in providing an incorrect e-mail address for Ann.

Ann's correct e-mail address is annstitcher @charter.net. Please contact Ann to obtain the Membership Directory and to provide her with up-to-date e-mail contacts.

NAMA/GSMS Foray, cont. from page 1

made famous in Longfellow's poem "Evangeline," and tour the historic St. Martin de Tours Catholic Church, where the priest-botanist-mycologist Father Langlois is buried under the altar.

Special Event: *Beginner's Hands-on Microscopy Workshop.* "Introduction to Using Microscopy (microscopes) for Mushroom Identification" will be held from the evening of the 22nd to the morning of the 25th. This is a hands-on workshop intended for beginners who have had little or no microscopy experience before. (Of course, it is open as well to others who wish to sharpen their microscopy skills and understanding of the use of microscopic features for mushroom ID.) All necessary microscopy equipment and supplies will be provided. The teacher is Walter J. Sundberg (Emeritus Professor, Southern Illinois University at Carbondale) and Andrew Methven (Professor, Eastern Illinois University). *Class enrollment is limited,* so register ASAP via the NAMA Foray registration process. For other questions and/or information about the class, contact Walter Sundberg (sundberg .wj.407@verizon.net).

Chief Mycologists will be Clark Ovrebo and Juan Luis Mata, GSMS Scientific Advisors. Presenters include M. Catherine Aime, LSU–Baton Rouge (past MSA secretary); Meredith Blackwell, LSU-Baton Rouge; Bart Buyck, National Museum of Natural History, Paris, France; Matthew Keirle, Florida College; D. Jean Lodge, USDA Forest Service, Puerto Rico; and, well-known to NAMA members, Jay Justice, Harold Keller (Dr Myxo), Andrew Methven, John Plishke III; Samir A. Ross, Ron Spinosa; Walt Sturgeon, Walt Sundberg, Rod Tulloss, and Tom Volk.

The Welcome to Louisiana will be given by Charles Allen, of Colorado State & ULM. Ursula Pohl, NAMA Mycophagy Chair, will prepare our sampling of many species of fungi. Patrick Leacock will be there for the NAMA Voucher Committee, to keep us updated on the species collected.

Some common mushrooms expected to occur this time of year include *Amanita citrina, A. polypyramis, A. muscaria, Hygrophorus* species, many *Cortinarius* and *Tricholoma* species, *Strobilurus conigenoides, Hericium erinaceus, Pluerotus ostreatus,* and *Lactarius paradoxus.*

We'll take field trips to nearby Longfellow–Evangeline State Historic Park in St. Martinville; Chicot State Park and the Louisiana State Arboretum, both north of Ville Platt; Nature Conservancy property at Lake Martin, a few miles east of town; the Acadiana Park and Nature Center, in the City of Lafayette.

The field trips will cover a variety of local topography that may be new and dramatic to many. Trip destinations will include a wetland area and a beech-magnolia-loblolly pine slope forest; a large cypress-tupelo forested lake, surrounded by mature hardwood uplands and extensive beech-magnolia forests; a park of live oaks and water oaks; and a nearby cypress swamp.

Lafayette has a Regional airport served by four airlines: Continental, American, Delta, and Northwest. The Holiday Inn provides a free shuttle to and from the airport, train station, and bus station. Other nearby airports are Baton Rouge Metro, Lake Charles Regional, Alexandria International, and New Orleans International.

Look for updates on the NAMA and GSMS websites: www.namyco .org and www.gsmyco.org.

Young Mycologists, cont. from page 1

room hunting and to live in the Pacific Northwest, where the houses have more kinds of mold than inhabitants, when I began college my curiosity in fungi was already piqued. However, had it not been for the enthusiasm and knowledge of mushrooms held by my professor Dr. Michael Beug, I don't think my interests would have gone any further than wanting to know the difference between chanterelles and hedgehogs. A quick survey of young mycologists reveals a similar story of mentors who brought them into the field and in some way shaped their current career trajectories.

At this point you may be saying to yourself, "Sure, we all have had teachers that have impacted our lives in a similar way, so shouldn't the creation of new mycologists just continue to be reciprocal? Where good teachers will encourage new students to take up the field and become teachers and so on?" It is my opinion that, sadly, this is not the case. The strength of our ability to teach about fungi and get students engaged in the field of mycology lies in exposing them, even if just in their own backyards, to wild mushrooms. Our task is made more difficult by the fact that in the U.S., not only does the study of fungi fundamentally have cultural taboos associated with it, but with the rise of molecular techniques, we are losing our experts in mushroom identification. The rise of molecular techniques for the study of fungi has provided a wealth of scientific discovery, especially when it comes to our knowledge of the sheer diversity of fungi in natural systems. However, what has been and can be accomplished through techniques like DNA sequencing of environmental samples in no way negates the need for field biology. We are at a crossroads in the mycological world where the paths of molecules and of morphology often diverge in the proverbial wood.

So where do we go from here? First off, the power to maintain and share fungal knowledge lies with you. Until we reach the day of tricorder-esc handheld DNA sequencers, we continue to rely on mushroom experts to impart their knowledge to others. Because of this, outreach to the next generation is critical. Perhaps visiting your niece's fourth-grade class to talk about mushrooms isn't your idea of a well-spent afternoon, but outreach doesn't have to happen in such

(*Continued on page 8*)

The North American Mycological Association Presents Foray 2009:

In the Heart of Cajun Country

November 26–29, 2009 • Lafayette, Louisiana

Hosted by the Gulf States Mycological Association

Name of each participant as you wish it to appear on your name tag. Deadline for registration: ***November 2, 2009.***

Name(s): _____

Address: _____

City, State, Zip: _____

Phone: Day ( )_____ Evening ( ) _____ e-mail: _____

Local club affiliation(s) for name tags: _____

I/we prefer: ❑ One bed ❑ Two beds ❑ Nonsmoking ❑ Smoking ❑ Please find me a roommate.

I want to share a room with _____ Assign roommate: ❑ Male ❑ Female

❑ I require vegetarian meals or have other special concerns: _____

_____

❑ I am a VENDOR. # display tables needed____ Items for sale: _____

_____

REGISTRATION

Conference: Thurs. Nov. 26 to Sun. Nov. 29

a room for 3 nights, 8 meals (Thurs. dinner–Sun. breakfast), all programs and forays ..... #_____ @ $320 each $_____

Waiver reason ..... # _____ @ 0

Single supplement ..... #_____ @ $120 $_____

Off site (meals, programs, forays, no rooms) ..... #_____ @ $199 each $_____

NAMA Trustees Meeting: Tues. Nov 24 to Thurs. Nov. 26

a room for 2 nights, 6 meals (Tues. dinner–Thurs. lunch) ..... #_____ @ $155 each $_____

Single supplement ..... #_____ @ $ 80 $_____

Microscopy Workshop: Sun. Nov. 22 to Thurs. Nov 26

a room for 4 nights, 12 meals (Sun. dinner–Thurs. lunch), microscopes and all materials ..... #_____ @ $400 each $_____

Single supplement ..... #_____ @ $156 $_____

NAMA membership (required if not current) ..... #_____ @ $ 35 $_____
(You must be a NAMA or GSMS member to attend.)

Mycology student discount: Subtract ..... #_____ @ –$100 each $ (_____)

University: _____

Professor: _____

Make checks payable to GSMS/NAMA 2009. **Mail to** GSMS/NAMA 2009, Patricia Lewis, 262 CR 3062, Newton, TX 75966-7003. **Questions?** Call Pat at 409-423-3776; e-mail to plewis@jas.net.

If you are interested in arriving early or staying late at the Holiday Inn–Lafayette at the conference-room rate, please discuss this with Patricia Lewis.

We must have a signed release for each person attending the foray.

Liability Release and Promise Not to Sue

I understand that there is some risk in participating in a mushroom foray and conference: all those risks one assumes by being away from home, risk associated with moving about in fields and woods, risk involved in eating wild mushrooms, risk of losing personal property by theft or misplacement, and all other expected and unexpected risks. In registering for or attending this foray, I agree to assume total responsibility during this event for my own safety and well-being, and for that of any minor children under my care, and for the protection of my and their personal property. I release the North American Mycological Association (NAMA), and the Gulf States Mycological Society (GSMS), their trustees, officers, employees, contractors, and all other persons assisting in the planning and presentation of this event from liability for any sickness, injury, or loss I or any minor children under my care may suffer during this event or as a result of attending and participating. I further promise not to file a lawsuit or make a claim against any of the persons listed above, even if they negligently cause me or my minor children injury or loss. Finally, I agree to hold NAMA and GSMS harmless from any liability they may incur as a result of any damages to any property I may cause. This release and promise is part of the consideration I give in order to attend this event. I understand it affects my legal rights. I intend it to apply not only to me but to anyone who may have the right to make a claim on my behalf.

Signature 1: _____ Date: _____

Print Name 1: _____

Signature 2: _____ Date: _____

Print Name 2: _____

VOLUNTEER OPTIONS

If you can help in any way, please let us know. The volunteer time of our members is what continues to make NAMA forays such a success and great time for everyone. The coordinator will contact you with details prior to the foray.

Display & Identification Area: ❑ Set up ❑ Assist identification ❑ Clean up

Mycophagy: Saturday

❑ Set up ❑ Preparation ❑ Clean up

❑ Bring mushrooms: specify type and species: _____

_____

Presentations: ❑ Assist with audio-visual set-up

❑ I have a digital projector I will bring for back-up.

I will bring the following items for the silent auction: _____

_____

2009 NAMA Photo Contest Entry Form Digital Only

Name:	
Address:	
Phone:	E-mail:

Entry Titles: **Documentary** (images suitable for the fungus or myxomycetes to be used in a guide book)
Judges Option (pictures that don't fit into either of the other two categories. and/or people, humor, etc.)
Pictorial (beautiful pictures of fungi or myxomycetes suitable for a calendar, poster, or coffee table book)

Your $4 fee allows you to enter up to 15 digital images in the contest. Please enter the titles of your photos (or digital filenames) on the lines below. Slides may be sent but will be converted to digitals and shown as digital photos.

Pictorial (Limited to 6 entries)	
P - 1:	P - 4:
P - 2:	P - 5:
P - 3:	P - 6:
Documentary (Limited to 6 entries)	
D - 1:	D - 4:
D - 2:	D - 5:
D - 3:	D - 6:
Judges' Option (Limited to 3 entries)	
JO - 1:	
JO - 2:	
JO - 3:	
Entry fee enclosed:	[ ] $4.00 for digital contest

Digital images must be mailed on a CD or DVD and will not be returned. Slides will be duplicated, then returned.

Mail images, entry forms, and entry fees (check payable to "NAMA") to: John Plischke III – Digital, 411 Center Avenue, Greensburg, PA 15601, (724) 832-0271, fungi01@aol.com

Reproduction: Entry in the contest constitutes the consent of the photographer to allow NAMA to reproduce copies of each winning slide or digital (including Honorable Mention, etc.) for circulation by the Education Committee among the membership and affiliated societies. NAMA also reserves the right to post images of the winning slides or digital on the NAMA web pages and in The Mycophile. All copyrights remain with the photographer.

All Entries Must Be Received by November 10, 2009

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Clarksville, MD 21029

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Heimioporus betula, *formerly* Austroboletus betula, *found in mixed hardwoods on top of a ridge in Painters Gap, North Carolina at the Wildacres Foray. Photo by David Rust. More on the Wildacres Foray next issue!*

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Young Mycologists, continued from page 4

orchestrated ways. What about that *Panaeolus* species that you found in your yard? Sure it's not the most charismatic of fungi, but to your friends, neighbors and family members it might be the first wild mushroom they've seen. That little LBM has gills, spores, a cap and a stalk (or stem), just like many other mushrooms, and therefore lends its self nicely to explaining the basics of mushroom identification. Furthermore, it's found in a particular yet common habitat (the lawn) and is known for having a saprotrophic lifestyle— some tidbits of knowledge that could be easily shared and could possibly pique someone's interest in the ecology of fungi. Fungi don't have to be something that is studied far afield or in the lab. Around your home are fungi in unexpected places (not just the bathroom): think of cheese, beer, and penicillin! Help those in your daily life to see that fungi are not something to fear, but an integral (and delicious) part of both human and natural systems.

As research in universities, colleges, and non-academic organizations such as the USDA Forest Service and the Nature Conservancy continue to rely heavily on molecular methods for the study of fungi, the role of the amateur mycological societies in engaging and training young mycologists will become all the more critical. Opportunities for outreach and education within these groups are innumerable. Additionally, more mycological societies could form collaborations with researchers that could complement their work in the lab. One such existing example is the collaboration between the Bruns lab at UC–Berkeley, the Mycological Society of San Francisco, and the Sonoma Mycological Association on the Pt. Reyes Myco-blitz (www.mykoweb.com/PtReyes) where multiple mushroom forays in Pt. Reyes National Seashore have lead to the creation of a publicly accessible database of the fungi found in the park. This type of collaboration not only assists in building understanding between molecular versus morphological identification of fungi, but also helps academic researchers meet important social responsibility criteria set by funding agencies such as the National Science Foundation. Above all, these forays are fun and get people from various backgrounds outdoors and looking at fungi. A natural extension of this type of collaboration could be organizing specific events for children and young adults.

It is my fervent hope that a younger generation will find the same delight in mushrooms that I did and still do today. Coming back to my initial question of what about fungi is so compelling, I'd have to answer that it is not only the intrigue of wild mushroom hunting, but more so of the people who study them, their enthusiasm for the natural world, and the knowledge they have to impart to others.

[*The author would like to thank A.S.A. and A.R.A. for valuable feedback on this article.*]